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**Substitute for form 1449A/PTO**

## **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

*(Use as many sheets as necessary)*

Sheet

1

of

5

Attorney Docket Number

**Complete If Known**

Application Number	10/734,812
Filing Date	12-11-2003
First Named Inventor	JARDINE, PETER A.
Art Unit	1775
Examiner Name	John J. Zimmerman
Attorney Docket Number	P042877-DLJLT

## U.S. PATENT DOCUMENTS

## FOREIGN PATENT DOCUMENTS

Examiner Signature	JOHN J. ZIMMERMAN	Date Considered	8/15/05
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Substitute for form 1449B/PTO				<i>Complete If Known</i>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				<i>Application Number</i>	10/734,812
<i>(Use as many sheets as necessary)</i>				<i>Filing Date</i>	12-11-2003
				<i>First Named Inventor</i>	JARDINE, PETER A.
				<i>Art Unit</i>	1775
				<i>Examiner Name</i>	John J. Zimmerman
Sheet	2	of	5	Attorney Docket Number	P042877-Ole JLT

NON PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		J.A. WALKER ET AL "Thin-film Processing of TiNi Shape Memory Alloy" Sensors and Actuators, vols. A21-A23, p. 243-246, 1990. (No Month)
		J.D. BUSCH et al., "Shape-memory properties in Ni-Ti Sputter Deposited Film", J. Appl. Phys., vol 68 (12), pp. 6224-6228, Dec. 15, 1990.
		K. KURIBAYASHI, et al., "Micron sized arm using reversible TiNi alloy thin film actuators" Mat. Res. Soc. Symp. Proc., vol 276, pp. 167-175, 1992 (No Month).
		J.D. BUSCH et al., "Phase transformations in sputtered Ni-Ti film: effects of heat treatment and precipitates", Mat. Res. Soc. Symp. Proc., vol 230, pp. 91-97, 1992 (No month)
		D.S. GRUMMON, et al., "Thermotractive titanium-nickel thin films for microelectromechanical systems and active composites", Mat. Res. Soc. Symp. Proc., vol 459, pp. 331-342, 1997 (No Month)
		Q. SU, et al. "Martensitic transformation in Ni <sub>50</sub> Ti <sub>50</sub> films" J. of Alloys and Compound, vol. 211/212, pp. 460-463, 1994 (No month)
		S. MIYAZAKI et al., "Shape memory characteristics of sputter-deposited Ti-Ni base thin films", SPIE, vol. 2441, pp. 156-164, 1995 (No Month)."
		A. ISHIDA, et al., "Shape memory behavior of Ti-Ni thin films annealed at various temperatures", Mat. Res. Soc. Symp. Proc., vol 360, pp. 381-388, 1995 (Month)
		C.A. RAY, et al. "A Silicon-based shape memory alloy microvalve", Mat. Res. Soc. Symp. Proc., vol 276, pp. 161-166 (1992). (No Month).
		W.L. BERNARD, et al. "Thin film shape memory alloy actuated micropumps", J. of Microelectromechanical Systems, vol. 7, No. 2, pp. 245-251, Jun. 1998
		K. KURABAYASHI, et al., "Trial fabrication of micron sized arm using reversible TiNi alloy thin film actuators", Proceedings of the 1993 IEEE/RSJ International Conf. on Intel. Robots and Sys., Yokohama, Japan, pp. 1697-1702, Jul 26-30, 1993

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				Art Unit	1775
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<i>JP</i>		S. MIYAZAKI, et al. "Effect of heat treatment on deformation behavior associated with R-phase and martensitic transformations in Ti-Ni thin films" Trans. Mat. Res. Soc. Jpn., vol. 18B, pp. 1041-1044, 1994 (No Month)
<i>JP</i>		A. ISHIDA, et al., "Effect of heat treatment on shape memory behavior of Ti-rich Ti-Ni thin films", Materials Transactions, JIM, vol. 36, No. 11, pp. 1349-1355, 1995 (No Month).
<i>JP</i>		A. PETER JARDINE, "Deposition parameters for sputter-deposited thin film TiNi", Mat. Res. Soc. Symp. Proc., vol. 360, pp. 293-298, 1995 (No Month).
<i>JP</i>		T.W. DEURIG, et al. Engineering Aspects of Shape Memory Alloys, pp. 3-46, 1990 (No month).
<i>JP</i>		S. MIYAZAKI, et al., "Development of perfect shape memory effect in sputter-deposited Ti-Ni films", Proceedings IEEE Micro Electro Mechanical Systems, pp. 176-181, 1994 (No Month).
<i>JP</i>		R.H. WOLF, et al. "TiNi (Shape Memory) Films on Silicon for MEMS Applications". J. of Microelectromechanical Systems, vol. 4, No. 4, pp.206-212, Dec. 1995.
<i>JP</i>		A. GYOBU, et al., "Martensitic transformation in sputter-deposited shape memory Ti-Ni films", Mat. Trans. JIM vol. 37, No. 4, pp. 697-702, Apr. 1996.
<i>JP</i>		P. KRULEVITCH et al., "Thin film shape memory alloy micro-actuators", J. of Microelectromechanical Systems, vol. 5, No. 4, pp. 270-282, Dec. 1996.
<i>JP</i>		J. FAVALUKIS, et al., "An Experimentally Validated Thermal Model of Thin Film NiTi", Proceedings of SPIE, vol. 3668, Part Two, pp. 617-629, Mar. 1-4, 1999.
<i>JP</i>		C.M. Ho, et al., "Mems: Science and Technology," Application of Microfabrication to Fluid Mechanics, FED V. 197, ASME 1994, pp. 39-49, 1994. (No Month).
<i>JP</i>		L.G. Carpenter: Vacuum Technology an Introduction, Adam Hilger Ltd., Bristol 2 <sup>nd</sup> Edition, (1983), pp. 76-82. (No Month)

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				Filing Date	12-11-2003
				First Named Inventor	JARDINE, PETER
				Art Unit	1775
				Examiner Name	JOHN ZIMMERMAN
Sheet	4	of	5	Attorney Docket Number	P042877-016-LIT

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(J)		Q.SU, et al., "Martensitic transformation in Ni50Ti50 films", SPIE vol. 2189, pp. 409-412 (1994). (No month)	
(J)		V.S. CHERNYSH, et al., "Angular distributions of Ni and Ti atoms sputtered from a NiTi alloy under He+ and Ar+ ion bombardment," Nuclear Inst. and Methods in Physics Research B 140, pp. 303-310 (1998) (No month).	
(J)		I. NESHEV, et al., "Sputtering of NiTi alloys: a comparison of experiment and simulation", Vacuum vol. 44, Nos. 3-4, pp. 209-212 (1993). (No Month).	
(J)		Ken K. Hol, et al., "Modeling and measuring the response of times of thin film TiNF", SPIE Proceedings Smart Mat. Tech., vol. 3040, San Diego, CA, Mar. 3-4 1997, pp. 10-22.	
(J)		E. QUANDT, et al., Sensors and Actuators A53 (1995) Sputter Deposition of TiNi and TiNiPd Films Displaying the Two Way Shape Memory Effect.	
(J)		BENDAHAN MARC, et al., "NiTi shape memory alloy thin films; composition control using optical emission spectroscopy", Thin Solid Films 283 (Sep. 1996), pp. 61-66	
(J)		KRULEVITCH, P. et al., "Mixed-sputter deposition of Ni-Ti-Cu shape memory films", Thin Solid Films 274 (Mar. 1996), pp. 101-105	
(J)		MIYAZAKI, S., et al., "Martensitic transformations in sputter-deposited Ti-Ni-Cu shape memory alloy thin films", Thin Solid Films 281-282 (Aug. 1996) pp. 354-367	
(J)		CHEN, J.Z., "Crystallization behavior of r.f.-sputtered TiNi thin films" Thin Solid Films 339 (Feb. 1999) pp. 194-199.	
(J)		HO, KEN et al., "Sputter depositions of NiTi thin film exhibiting the SME at room temperatures", Proceedings of the Symposium, 1998 ASME International Mechanical Engineering Congress and Exposition, Nashville, TN, Nov. 14-19, 1998.	
(J)		GABRY, B., et al., "Thermodynamic modeling of the recovery strains of sputter-deposited shape memory alloys Ti-Ni and Ti-Ni-Cu thin films", Thin Solid Films 372 (Sep. 2000), pp. 118-133	

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		<i>Examiner Name</i>	JOHN ZIMMERMAN
Sheet	5	of	5
		<i>Attorney Docket Number</i>	
		P042877-06-UT	

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